FDE0050 0084/8990

10

20

22

FIG. 1

Left input signals:
ID[4:1][7:0]
IDP[4:1]
IPL[4:1]
IJOJ1[4:1]
IPAIS[4:1]
ITV5[4:1]
ITPL[4:1]
ITAIS[4:1]

SYSCLK

OD[4:1][7:0]
ODP[4:1]
OPL[4:1]
OJOJ1[4:1]
OPAIS[4:1]
OTV5[4:1]
OTPL[4:1]
OTAIS[4:1]

Control signals: TJOFP, TCMP, RJOFP, OCMP, RWSEL

Blocks:

34 — Incoming Data 8B/10B Encoder (IDBE #1 - #4)
Incoming TeleCombus PRBS Processor (ITPP #1 - #4)
Incoming PRBS 8B/10B Encoder (IP8E #1 - #4)

30, 32

36 — Transmit Working Time-Slot Interchange (TWTI)
38 — Transmit Protect Time-Slot Interchange (TPTI)
40 — Transmit Auxiliary Time-Slot Interchange (TATI)

42 — Transmit Working Disparity Encoder (TWDE #1 - #4)
44 — Transmit Protect Disparity Encoder (TPDE #1 - #4)
46 — Transmit Auxiliary Disparity Encoder (TADE #1 - #4)

48 — Transmit Working Serialiser (TWPS #1 - #4)
50 — Transmit Protect Serialiser (TPPS #1 - #4)
52 — Transmit Auxiliary Serialiser (TAPS #1 - #4)

54 — Transmit Working LVDS Interface (TWLV #1 - #4)
64 — Transmit Protect LVDS Interface (TPLV #1 - #4)
66 — Transmit Auxiliary LVDS Interface (TALV #1 - #4)

60 — Tx Ref
62 — Clock Synthesis Unit

6? — Receive Working LVDS Interface (RWLV #1 - #4)
7? — Receive Protect LVDS Interface (RPLV #1 - #4)
68 — Receive Auxiliary LVDS Interface (RALV #1 - #4)

70 — Working Data Recovery Unit (WDRU #1 - #4)
72 — Protect Data Recovery Unit (PDRU #1 - #4)
74 — Auxiliary Data Recovery Unit (ADRU #1 - #4)

76 — Receive Working 8B/10B Decoder (RW8D #1 - #4)
78 — Receive Protect 8B/10B Decoder (RP8D #1 - #4)
80 — Receive Auxiliary 8B/10B Decoder (RA8D #1 - #4)

82 — Receive Working PRBS Monitor (RWPM #1 - #4)
84 — Receive Protect PRBS Monitor (RPPM #1 - #4)
86 — Receive Auxiliary PRBS Monitor (RAPM #1 - #4)

88 — Receive Working Time-Slot Interchg (RWTI)
90 — Receive Protect Time-Slot Interchg (RPTI)
92 — Receive Auxiliary Time-Slot Interchg (RATI)

94 — Outgoing TeleCombus PRBS Generator (OTPG #1 - #4)

Microprocessor Interface
JTAG

Right output signals:
TPWRK[4:1]
TNWRK[4:1]
TPPROT[4:1]
TNPROT[4:1]
TPAUX[4:1]
TNAUX[4:1]

RPWRK[4:1]
RNWRK[4:1]
RPPROT[4:1]
RNPROT[4:1]
RPAUX[4:1]
RNAUX[4:1]

Microprocessor Interface pins: A[11:0], D[15:0], RSTB, CSB, WRB, RDB, ALE, INTB

JTAG pins: TRSTB, TCK, TMS, TDI, TDO

Code Group Name	Curr. RD- abcdei fghj	Curr. RD+ abcdei fghj	Decoded Signals Description
Multiplex Section Termination (MST) Mode			
K28.5	001111 1010	110000 0101	IJ0J1='b1, IPL = 'b0 Transport frame alignment
K.28.4-	001111 0010	-	IPAIS='b1' High-order path AIS
High-Order Path Termination (HPT) Mode			
K28.0-	001111 0100	-	IPL = 'b0, High-order path H3 byte, no negative justification event
K28.0+	-	110000 1011	IPL = 'b0 High-order path positive stuff opportunity byte, positive justification event
K28.6	001111 0110	110000 1001	IJ1='b1', IPL = 'b1 High-order path frame alignment

FIGURE 1A

Code Group Name	Curr. RD- abcdei fghj	Curr. RD+ abcdei fghj	Decoded Signals Description
Low-Order Path Termination (LPT) Mode			
K.28.4+	-	110000 1101	ITAIS='b1' Low-order path AIS ID[7:0] = 'hFF
K27.7-	110110 1000	-	ITV5 = 'b1,, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b00, ID[5] = REI = 'b0
K27.7+	-	001001 0111	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b00, ID[5] = REI = 'b1 ID[7,6,3:1] = 'b00000
K28.7-	001111 1000	-	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b01, ID[5] = REI = 'b0 ID[7,6,3:1] = 'b00000
K28.7+	-	110000 0111	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b01, ID[5] = REI = 'b1 ID[7,6,3:1] = 'b00000
K29.7-	101110 1000	-	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b10, ID[5] = REI = 'b0 ID[7,6,3:1] = 'b00000
K29.7+	-	010001 0111	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b10, ID[5] = REI = 'b1 ID[7,6,3:1] = 'b00000
K30.7-	011110 1000	-	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b11, ID[5] = REI = 'b0 ID[7,6,3:1] = 'b00000
K30.7+	-	100001 0111	ITV5 = 'b1, ITPL = 'b1 Low order path frame alignment ID[0,4] = ERDI[1:0] = 'b11, ID[5] = REI = 'b1 ID[7,6,3:1] = 'b00000
K23.7-	111010 1000	000101 0111	ITPL = 0 Non low-order path payload overhead bytes (RSOH, MSOH, POH, R, V1, V2, V3, V4) ID[7:0] = 'h00

FIGURE 1B

Frame Counter	8B/10B Encoder

102 → (Frame Counter)

104 → (8B/10B Encoder)

32

FIGURE 2

Data Buffer	Connection Memory

106 → (Data Buffer)

108 → (Connection Memory)

36

FIGURE 3

FIFO Buffer	Frame Counter	
Character Aligner	Frame Aligner	Character Decoder

112

110 → (FIFO Buffer)

114 → (Character Aligner)

116

118 → (Character Decoder)

76

FIGURE 4

Code Group Name	Curr. RD- abcdei fghj	Curr. RD+ abcdei fghj	Decoded Signals Description
Multiplex Section Termination (MST) Mode			
K28.5	001111 0100	110000 1011	OJ0='b1' Transport frame alignment OD[7:0] = 'h01
K.28.4-	001111 0010	-	OPAIS='b1' High-order path AIS OD[7:0] = 'hFF
High-Order Path Termination (HPT) Mode			
K28.0-	001111 0100	-	OPL = 'b0, High-order path H3 byte, no negative justification event OD[7:0] = 'h00
K28.0+	-	110000 1011	OPL = 'b0 High-order path PSO byte, positive justification event OD[7:0] = 'h00
K28.6	001111 0110	110000 1001	OJ1='b1' High-order path frame alignment OD[7:0] = 'h00

FIGURE 5A

Code Group Name	Curr. RD- abcdei fghj	Curr. RD+ abcdei fghj	Decoded Signals Description
Low-Order Path Termination (LPT) Mode			
K27.7-	110110 1000	-	OTV5 = 'b1,, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b00, OD[5] = REI = 'b0
K27.7+	-	001001 0111	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b00, OD[5] = REI = 'b1 OD[7,6,3:1] = 'b00000
K28.7-	001111 1000	-	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b01, OD[5] = REI = 'b0 OD[7,6,3:1] = 'b00000
K28.7+	-	110000 0111	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b01, OD[5] = REI = 'b1 OD[7,6,3:1] = 'b00000
K29.7-	101110 1000	-	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b10, OD[5] = REI = 'b0 OD[7,6,3:1] = 'b00000
K29.7+	-	010001 0111	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b10, OD[5] = REI = 'b1 OD[7,6,3:1] = 'b00000
K30.7-	011110 1000	-	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b11, OD[5] = REI = 'b0 OD[7,6,3:1] = 'b00000
K30.7+	-	100001 0111	OTV5 = 'b1, OTPL = 'b1 Low order path frame alignment OD[0,4] = ERDI[1:0] = 'b11, OD[5] = REI = 'b1 OD[7,6,3:1] = 'b00000
K23.7-	111010 1000	-	OTPL = 0 Non low-order path payload bytes (RSOH, MSOH, POH, R, V1, V2, V3, V4) OD[7:0] = 'h00
K.28.4+	-	110000 1101	OTAIS='b1' Low-order path AIS OD[7:0] = 'hFF

FIGURE 5B